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THE GENUS MICROPEZA IN NORTH AMERICA

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The following table of species is taken largely from the descriptions, although I had six of the species before me, Van der Wulp's table of species in the *Biologia Centrali Americana* and Mr. E. T. Cresson's table of species having the first posterior cell open, in the *Transactions of the American Entomological Society*, Vol. ix, pages 1-12, were also a great help, but determinations from the table should not be depended upon without consulting the original descriptions, as is always the case with any table of species.

***Micropeza californica* Van Duzee, new species**

Female. Length, 8 mm. Face and cheeks dark reddish; occiput shining yellow with a broad, U-shaped black band, which is open above and does not quite reach the neck. This U includes the black ocellar spot and bares two bristles on each side; below this spot near the neck on each side is another bristle and several black hairs; eyes separated on their upper part by reddish orbits, the front below being black; antennæ wholly reddish, arista white; a shining reddish-brown spot below each antenna.

Thorax and abdomen reddish, most of the dorsum black, the scutellum opaque black with corners and apical edge reddish. Dorsum of thorax with two bristles back of the suture, and one near the pleural suture halfway from the humeri to the suture, two or three bristles below and back of the root of the wing; one pair of marginal bristles on the scutellum. Venter and ovipositor reddish yellow, the latter shining on basal two-thirds, apical third more black above, ovipositor nearly as long as the abdomen.

Coxæ, femora, and tibiæ reddish yellow; femora with spots or rings at basal two-fifths and near the apex; tips of all tibiæ and whole of tarsi black. Wings a little grayish, veins brown; first posterior cell closed and short-petiolate; first anal cell cut off squarely at apex opposite base of radial sector.

Type, female, No. 1878, Mus. Calif. Acad. Sci., taken by Dr. E. C. Van Dyke, April 3, 1925, at Palm Springs, Riverside County, California,

***Micropeza lineata* Van Duzee, new species**

Length, 5-6 mm. Head, thorax, venter of abdomen, coxæ, femora and tibiæ pale yellow; front and occiput shining with the following black marks; a short median line between the eyes, a small spot around the ocelli, a line on each side, starting back of the upper inner corner of the eye and extending in an arc to the neck, where they unite forming a circle, widely separated above, and a small spot where the postvertical bristles are inserted. Occiput bulging a little back of the eyes, and extending back two-thirds the width of the eye; besides the postvertical bristles there are two more on each side placed along the black circular line. Antennæ yellow with upper edge of third joint narrowly black; a round black spot on the face below each antenna; sides of face silvery pollinose.

Dorsum of thorax with four brown lines, which are somewhat convergent in front where they unite into two and end in black spots; middle pair ending posteriorly at the suture with a black dot behind the suture at the end of each, the space between them more whitish; the lateral lines continue beyond the suture halfway to the scutellum where there is a very narrow median line between them; scutellum yellow with a black spot at base in the center and one pair of marginal bristles. Dorsum of thorax with two bristles on each side back of the suture, one near the pleural suture and one just in front of the dorsal suture; pleuræ with one bristle and several hairs below the wing, pluræ with a brown stripe, narrow at the neck, wider posteriorly, not very well defined but extending their whole length. Upper surface of first two abdominal segments blackish. Lower surface of thorax with long hairs, pale and black mixed. Hind femora with a row of black hairs on middle third of anterior surface. Tips of all tibiæ and all tarsi deep black.

Wings grayish, veins yellow; first posterior cell open; first anal cell cut off squarely at apex (not but little beyond the base of the radial sector).

Type, No. 1879, Mus. Calif. Acad. Sci., taken by E. P. Van Duzee, June 25, 1922, at **Utah Lake, Lehi, Utah.**

The abdomen of the type is injured so as to make the sex and length of body a little uncertain, but the species should be readily recognized by the characters given.

TABLE OF THE NORTH AMERICAN SPECIES OF MICROPEZA

1. Femora with brown or black rings or spots.....	2
— Femora without brown rings or spots.....	12
2. Abdomen rufous with the hind margins of the segments yellow, sometimes the abdomen testaceous (Mexico), male of.....	<i>stigmatica</i> Van der Wulp
— Abdomen black, at least on upper surface.....	3

3. Antennæ black or partly black..... 4
- Antennæ wholly reddish or yellow..... 7
4. Thorax unmarked (Mexico), female of.....*incisa* Wiedemann
- Thorax cinereous with distinct lines of brown on the dorsum.... 5
5. Antennæ wholly black (Mexico).....*nigricornis* Van der Wulp
- Antennæ partly red or yellow..... 6
6. Dorsum of thorax with two median stripes and some markings
on each side; pleuræ not spotted (Mexico).....
.....*bilineata* Van der Wulp
- Dorsum of thorax with three median lines; pleuræ with
numerous small dots (Mexico).....*stigmatica* Van der Wulp
7. Dorsum of thorax brown, densely gray pollinose, with two
median lines and a lateral mark on each side, which is
interrupted at the suture (Lower California)....*flaviventris* Cole
- Thorax without distinct vittæ..... 8
8. Dorsum of thorax reddish..... 9
- Dorsum of thorax black..... 10
9. Pleuræ with a straw-yellow stripe above the coxæ; wings with
a brown stripe in front (Porto Rico).....*limbata* Roeder
- Pleuræ and wings without stripes (Mexico).....*divisa* Wiedemann
10. Uniformly black in color with some gray reflections; abdomi-
nal segments with narrow gray hind margins (Mexico)
.....*obscura* Bigot
- Uniformly black, mesonotum with the gray pollen forming
two indistinct lines (Mexico), male of.....*incisa* Wiedemann
- Pleuræ partly or wholly red or yellow..... 11
11. Pleuræ pale yellow with a bluish patch in the center (Mexico)
female of.....*incisa* Wiedemann
- Pleuræ wholly reddish; abdominal segments with reddish hind
margins; mesonotum black in the center, yellow on the
sides (California).....*californica* new species
12. Antennæ wholly black (Arizona).....*turcana* Townsend
- Antennæ partly or wholly yellow or red..... 13
13. Antennæ partly red or yellow, more or less black..... 14
- Antennæ wholly red or yellow..... 15
14. Fore part of thorax with four, posterior part with three brown
lines; anal cell not at all acute apically, the vein closing
it nearly perpendicular with sixth vein (Utah).....
.....*lineata* new species
- Thorax black in the center of the dorsum; anal cell acute
(Texas ?).....*turcana ambigua* Cresson
15. Front shining black with two large yellow spots before the
antennæ; sternopleuræ with one brown band (Mexico)
.....*occipitalis* Van der Wulp
- Front black with two straw yellow dots; pleuræ with two
brown stripes (Mexico).....*pectoralis* Wiedemann

The following three North American species are not included in the table, as the characters used in the key are not all mentioned in the descriptions.

Producta Walker (Georgia, Cuba, Jamaica). First posterior cell closed in the border of the wing; femora not banded; thorax and abdomen rufous.

Bisetosa Coquillette (Arizona, New Mexico). Black mesonotum gray pollinose with four brownish vittæ; posterior margin of each abdominal segment yellow; third antennal joint yellow below; femora black with yellow base; coxæ yellow; knobs of halteres infuscated; upper part of face, cheeks, mouth parts and lower part of occiput yellow.

Ruficeps Van der Wulp (Mexico). Antennæ red; femora without dark rings or spots; first posterior cell closed in the wing margin.

A TABLE OF THE NORTH AMERICAN SPECIES OF HYDROPHORUS WITH THE DESCRIPTION OF A NEW FORM (DIPTERA)

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In 1864 Doctor Loew published the first table of North American species of the genus *Hydrophorus*, separating the three species known to him at the time. In 1899 Doctor Wheeler's table of species of the genus appeared, containing ten species, and in 1911 Doctor Aldrich revised the genus, describing a number of new species and giving a table to the twenty-four species known to him at the time. In 1923 my table containing thirty-four forms appeared; since then eleven new species have been published, and in this paper is one more; so it seems the time has come when we need another table, that those working in the genus may more easily determine their material. The present table separates forty-eight species, all but one or two of which I have examined in my work on the genus.

Hydrophorus vandykei Van Duzee, new species

Male. Length, 2 mm.; of wing, 4 mm. Upper portion of face bright green, lower part and a narrow space above the suture thickly covered with silvery-white pollen; lower orbital cilia and beard yellow; one pair of postverticals; antennæ small, black; front opaque with brown pollen; occiput dark green, quite shining; cheeks forming a small lobe below the eye.